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Department of Energy
Richland Operations Office
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APR 17 1992

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CORRESPONDENCE CONTROL

Mr. David B. Jansen, P.E.
Hanford Project Manager
Washington State
Department of Ecology
P. O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Jansen:

N SPRINGS INTERIM RESPONSE ACTION

References: (1) Letter, S. H. Wisness, DOE-RL, to D. B. Jansen, Ecology, Request for Schedule Extension in Response to N Springs Interim Response Action, dated March 10,1992. 19463

(2) Letter, L. Goldstein, Ecology, to J. D. Goodenough, DOE-RL, N Springs Remediation, dated February 10, 1992. 19200

Reference 1 advised you that a further response concerning N Springs stabilization would be forthcoming. The purpose of this letter provides that response and proposes a frame work in which the objective of implementing some form of response action can be accomplished in a timely manner that is coordinated with the Environmental Restoration Program and safe stabilization of the N Reactor. In addition, we have described work activities which are in progress this fiscal year directed at achieving a more complete understanding of the mechanisms of contaminant migration at the 100-N Area.

Enclosure 1 shows an aerial perspective of the 100-N Area with regulatory driven milestones indicated. Per major regulatory grouping these are:

Hanford Federal Facility Agreement and Consent Order (Tri Party Agreement)

M-12-12	Submit 100-NR-1 Operable Unit Work Plan, December 1990, rescoped work plan December 1991, followed by RFI/CMS plan submittals per M-13-00
M-12-14	Submit 100-NR-2 (was 100-NR-3) Operable Unit Work Plan, December 1990, rescoped work plan December 1991, followed by RFI/CMS plan submittals per M-13-00
M-15-00	Complete RFI/CMS process, September 2005
M-16-00	Complete remedial action for all operable units, September 2018

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M-17-00 Complete liquid effluent treatment facilities/upgrades for all Phase I streams, June 1995

M-17-10 Cease all liquid discharges to hazardous land disposal units unless such units have been clean closed in accordance with RCRA, June 1995

M-17-13 Submit methodology for assessing impact of liquid discharge on groundwater at disposal sites for approval, October 1991

M-17-15A Limit discharges to 1325-N to less than 2 gpm, April 1991

M-17-15B Submit N Reactor BAT/AKART evaluation, January 1992

M-17-15C Submit plan to cease discharge to 1325-N, January 1992

M-17-15D Submit NPDES permit modification, June 1992

M-20-31 Submit RCRA Closure Plan for the 1301-N and 1325-N Liquid Waste Disposal Facilities, May 1994

M-20-35 Submit RCRA Closure Plan for the 1324N/NA Surface Impoundment/Percolation Pond, September 1994

Liquid Effluent Consent Order

Limit discharges to 1325-N to less than 2 gpm, April 1991

Develop a plan to reroute N Reactor effluent after treatment by BAT to river, January 1992

Submit 216 Application for 100-N Sanitary Waste Disposal Facility and 183-N Filter Backwash, June 1994

National Pollutant Discharge Elimination System

Maintain surface water discharges in compliance with the discharge limitations in Permit No. WA-000374-3

DOE Orders

5400.5 Radiological Protection of the Public and Environment

The above list demonstrates the magnitude of the diverse regulatory driven milestones that exist at the 100-N Area where there are currently four distinct missions. The first is directed at placing the N Reactor in a stabilized condition for future decontamination and decommissioning (D & D). The second is directed at remediation of the 100-NR-1 and 2 Operable Units. The third is directed at the RCRA closures for the soil column disposal sites.

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The fourth is directed at final decontamination and decommissioning of the 100-N facilities. We anticipate some D&D activities will be required in order to accomplish certain of the site remediation objectives. Integrating work activities and schedules of these four missions has already been done to a certain extent in the 100-NR-1 Operable Unit Work Plan.

The decision-making process concerning a remedial action at 100-N should be part of a comprehensive and sitewide remedial strategy. To accomplish this goal, some prioritization of work and regulatory strategies will have to be re-evaluated. RL will initiate discussions with the regulatory community by the end of April 1992.

We believe that an alternative to discharging radioactive effluents to the soil column must be implemented prior to any major field initiatives directed at stabilizing N Springs. The alternative strategy is sequenced in the TPA M-17-15A, B, C, and D, and Liquid Effluent Consent Order milestones. This alternative strategy, i.e., use of an existing NPDES outfall following BAT, needs to be operational before major liquid effluent generating activities associated with N Reactor shutdown are started. It is estimated that shutdown will generate approximately 6 million gallons of effluent between 1994 and 1999.

The above activities do not necessarily preclude further field studies and other work focusing on N Springs. Enclosure 2 provides a brief status of applicable or relevant work that has been completed or is in progress to support the decision making process for N Springs. It is evident that work has been performed and is still progressing to gather pertinent technical data as a decision basis.

The schedule Ecology proposed for conducting an Interim Response Measure (IRM) at N Springs in Reference 2 cannot be satisfied based upon current budget planning. As a means of achieving some schedule priority and funding for N Springs, we believe it may be cost effective to satisfy the RCRA Closure process for the 1301-N, 1325-N, and 1324-N/NA facilities by addressing the substantive requirements of their closure in the scope of the 100-NR-1 Operable Unit. A schedule priority for N Springs can then be accomplished by using budgeted funds for N Springs instead. Then the 100-NR-1 operable unit scope would also include site characterization and any closure activities for these facilities. This is supported by the results of the RCRA groundwater monitoring (WHC-SD-EN-EV-003, Westinghouse Hanford Company, Results of Groundwater Quality Assessment Monitoring of 1301-N and 1324-N/NA) and soil sampling activities conducted to date which have shown no hazardous waste components at any of these facilities.

Sections 5.5 and 6.3 of the TPA address situations where a land disposal unit is being closed in conjunction with an operable unit and where initial investigation shows the unit no longer contains hazardous waste or constituents. Further, a procedure to coordinate the TSD unit closure with the past practice investigation and remediation activities to prevent overlap and duplication of the work is necessary. At this time we are not aware that

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such a procedure has been developed, who has the lead role, or what the schedule for completion is.

In summary, implementing a response action at N Springs should be compatible with overall sitewide remedial strategy coordinating other regulatory driven milestone activities and their schedules. Implementation of a procedure that would integrate the RCRA closure process with the operable unit activity would preclude redundant work, resulting in savings which can be allocated to N Springs.

Please call Mr. J. E. Mecca, Director, Operations Division, on (509) 376-7471, regarding 100-N Area operations issues. Please address all comments or questions regarding 100 Area past-practice site environmental investigation issues to Mr. E. D. Goller, on (509) 376-7326. Mr. K. Michael Thompson, (509) 376-6421, will contact you by the end of April to initiate discussions to develop a comprehensive and sitewide remedial strategy.

Sincerely,

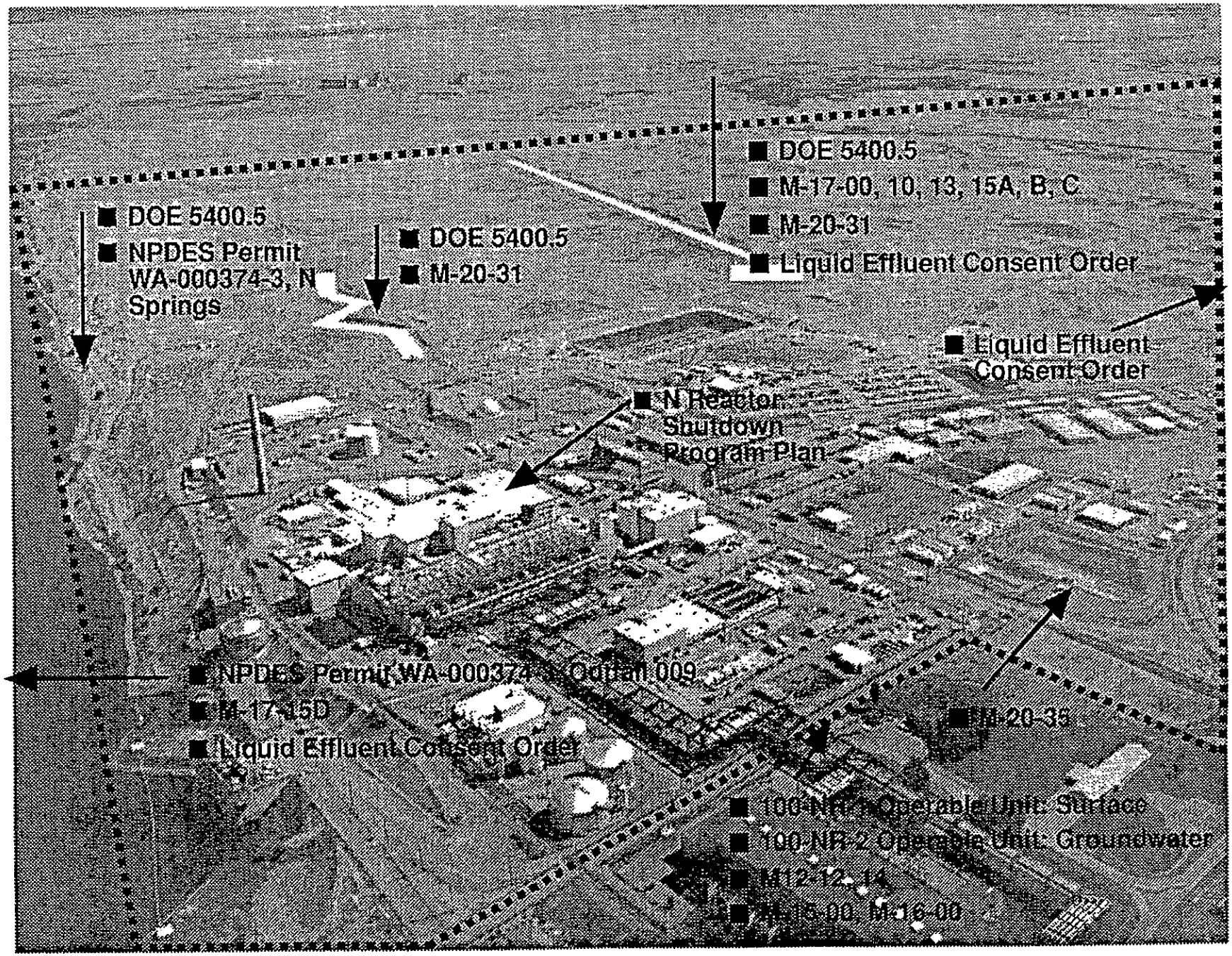
S. H. Wisness
Hanford Projects Manager

OPD:JEM

Enclosures
1. 100-N Regulatory Driven Milestones Depiction
2. N Springs Applicable or Relevant Work

cc: P. T. Day, EPA
L. P. Duffy, EM-1
J. Lytle, EM-30
R. P. Witfield, EM-40
S. A. Mann, EM-441
J. C. Lehr, EM-442
J. L. Monhart, EM-442
J. Boda, EM-322
J. Tseng, EM-30
H. L. Debban, WHC
R. E. Lerch, WHC
T. B. Veneziano, WHC

100-N Regulatory-driven Milestones



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Enclosure 1

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N SPRINGS

Applicable or Relevant Work

IN PROGRESS

- N Springs Mass Flow Release Model

  This task prepares a model for use in determining the mass of groundwater discharged to the Columbia River through a vertical plane representing N Springs. Formulations are based on regional and local groundwater gradients.

- Aquifer Diffusivity Determination

  This task derives aquifer characteristics using 12 months of river-level and well water-levels collected for determining the influence of the Columbia River on the unconfined aquifer at 100-N.

- Geochemical Interaction Between Groundwater and 1301-N Residuals

  This task examines the effects of changing chemical equilibrium on the residual radioactive contamination under the 1301-N Liquid Waste Disposal Facility. Work includes conducting bench scale tests on native soils using ^{89}Sr as a tracer which is more readily analyzed than ^{90}Sr. The mock-up soil column will be loaded with ^{89}Sr, after which water with it's chemical constituents (e.g., Na, Ca, SO_4) increasing with time will be used to determine the remobilization potential for the strontium. Certain tests will also be performed with ^{90}Sr as a comparison to represent actual field conditions

- N Springs Sampling and Monitoring Assessment

  This task is an independent assessment of current sampling and monitoring techniques being used to determine the concentrations of radionuclides being released at N Springs.

- 1301-N Down Gradient RCRA Well Installation and Soil Sampling/Analysis

  In FY 1992, two new RCRA groundwater monitoring wells will be drilled down gradient of the 1301-N LWDF. Soil samples from these wells will be analyzed to determine the presence of any RCRA hazardous constituents.

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- N Springs Environmental Assessment
  This task satisfies DOE's NEPA requirements prior to undertaking a proposed action by analyzing alternative actions and will also include a risk assessment.

COMPLETE

- "Scoping Assessment of Radiological Doses to Aquatic Organisms and Wildlife Found at N Springs," letter report, Poston/Soldat, dated January 1992
- "Engineering Evaluation of Containment Alternatives for N Springs Releases," WHC-SD-EN-EE-003, Rev. 0, May 1991.
- "Numerical Simulation of the Strontium-90 Transport from the 100-N Area Liquid Waste Disposal Facility," WHC-SD-ER-TA-001, Rev. 0, February 1991.
- "Evaluation of the Effects of the Columbia River on the Unconfined Aquifer Beneath the 100-N Area," PNL-7646, May 1991.

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*REISSUE

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Author	Addressee	Correspondence No.
S. H. Wisness, RL	D. B. Jansen, Ecology	Incoming 9202737

Subject: N SPRINGS INTERIM RESPONSE ACTION

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		T. M. Wintczak	L4-92	X
		R. D. Wojtasek	L4-92	
		EDMC	H4-22	X

Reference (1) is Incoming Letter 9201740
Reference (2) is Incoming Letter 9200566
ldp, 6-7049

*Reissue of letter on 4/30/92 to show correct letter number (9202311 is incorrect). Letter only.

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